

**REMARKS**

The Office Action mailed February 23, 2007, has been received and reviewed. Claims 1, 3-9, and 11-23 are currently pending in the application. Claims 1, 3-9, and 11-23 stand rejected. Applicant has amended claims 1 and 16, and respectfully request reconsideration of the application as amended herein.

**35 U.S.C. § 103(a) Obviousness Rejections**

Obviousness Rejection Based on U.S. Patent No. 5,716,534 to Tsuchiya et al. in view of U.S. Patent No. 6,849,154 to Nagahata et al.

Claims 1, 3-9, 11, 13-17, and 23 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsuchiya et al. (U.S. Patent No. 5,716,534) in view of Nagahata et al. (U.S. Patent No. 6,849,154). Applicant respectfully traverses this rejection, as hereinafter set forth.

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, **the prior art reference (or references when combined) must teach or suggest all the claim limitations.** The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). (Emphasis added).

The 35 U.S.C. § 103(a) obviousness rejections of claims 1, 3-9, 11, 13-17, and 23 are improper because the elements for a *prima facie* case of obviousness are not met. Specifically, the rejection fails to meet the criterion that the prior art reference must teach or suggest all the claims limitations.

**Independent Claims 1 and 16**

Regarding independent claims 1 and 16 and claims 3-9, 11, 13-15, 17, 23 depending therefrom, Applicant has amended independent claims 1 and 16 to include claim limitations not taught or suggested in the cited references.

Applicant's independent claim 1, as presently amended, recites:

1. A plasma reactor, comprising:  
first, second and third power generators wherein the first power generator is coupled to an upper electrode and ***the second and third power generators are coupled to a lower electrode for supporting a wafer thereon***, the first, second and third power generators being frequency-based power generators; and  
a controller configured to individually selectively activate the first, second and third power generators to a plurality of activation configurations during a corresponding plurality of phases of a duty cycle of a process. (Emphasis added.)

Applicant's independent claim 16, as presently amended, recites:

16. A plasma reactor, comprising:  
a vacuum chamber including upper and lower electrodes therein;  
first, second and third power generators wherein the first power generator is coupled to an upper electrode and ***the second and third power generators are coupled to a lower electrode for supporting a wafer thereon***, the first, second and third power generators being frequency-based power generators; and  
a controller configured to individually selectively activate the first, second and third power generators to a plurality of activation configurations during a corresponding plurality of phases of a duty cycle of a process. (Emphasis added.)

Applicant respectfully asserts that neither the Tsuchiya reference nor the Nagahata reference, either individually or in any proper combination, teach or suggest Applicant's invention as presently claimed in amended independent claims 1 and 16.

The Office Action cites the Tsuchiya reference for teaching or suggesting **two** frequency-based power **generators** 29 and 18 **connected to an upper electrode**. (Office Action, p. 3).

The Office Action cites the Nagahata reference for teaching or suggesting:

... first, second and third frequency based power generators [144], 126, 122 wherein the **first and third power generators** 144, 126 are **coupled to an upper electrode** 106, and the second power generator[] 122 is coupled to a lower electrode 108 (***claim does not recite which of the upper or lower electrode ... the substrate is supported***) .... (Office Action p. 3; emphasis added.)

Applicant respectfully asserts that the Office Action concedes that both the Tsuchiya reference and the Nagahata reference teach two power generators coupled to the upper (non-

wafer supporting) electrode. In contrast, Applicant's independent claims 1 and 16 recite, in part, "***the second and third power generators are coupled to a lower electrode for supporting a wafer thereon***".

Therefore, since neither the Tsuchiya reference nor the Nagahata reference teach or suggest Applicant's claimed invention including the element of "***the second and third power generators are coupled to a lower electrode for supporting a wafer thereon***", these references, either individually or in any proper combination, cannot render obvious, under 35 U.S.C. §103, Applicant's invention as presently claimed in amended independent claims 1 and 16. Accordingly, Applicant respectfully requests the rejections of presently amended independent claims 1 and 16 be withdrawn.

The nonobviousness of independent claim 1 precludes a rejection of claims 3-9, 11 and 13-15 which depend therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. *See In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03. Therefore, the Applicant requests that the Examiner withdraw the 35 U.S.C. § 103(a) obviousness rejection to independent claim 1 and claims 3-9, 11 and 13-15 which depend therefrom.

The nonobviousness of independent claim 16 precludes a rejection of claims 17 and 23 which depend therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. *See In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03. Therefore, the Applicant requests that the Examiner withdraw the 35 U.S.C. § 103(a) obviousness rejection to independent claim 16 and claims 17 and 23 which depend therefrom.

Obviousness Rejection Based on U.S. Patent No. 5,716,534 to Tsuchiya et al. in view of U.S. Patent No. 6,849,154 to Nagahata et al. as applied to claims 1, 16 and further in view of U.S. Patent No. 6,492,280 to DeOrnellas et al.

Claims 12, and 18-22 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tsuchiya et al. (U.S. Patent No. 5,716,534) in view of Nagahata et al. (U.S. Patent No. 6,849,154) as applied to claims 1, 16 and further in view of DeOrnellas et al. (U.S. Patent No.

6,492,280). Applicant respectfully traverses this rejection, as hereinafter set forth.

The nonobviousness of independent claim 1 precludes a rejection of claim 12 which depends therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. *See In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03. Therefore, the Applicant requests that the Examiner withdraw the 35 U.S.C. § 103(a) obviousness rejection to independent claim 1 and claim 12 which depends therefrom.

The nonobviousness of independent claim 16 precludes a rejection of claims 18-22 which depend therefrom because a dependent claim is obvious only if the independent claim from which it depends is obvious. *See In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988), *see also* MPEP § 2143.03. Therefore, the Applicant requests that the Examiner withdraw the 35 U.S.C. § 103(a) obviousness rejection to independent claim 16 and claims 18-22 which depend therefrom.

### CONCLUSION

Claims 1, 2-9 and 11-23 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, the Examiner is respectfully invited to contact Applicant's undersigned attorney.

Respectfully submitted,



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Date: May 22, 2007  
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